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| APPLICATION NO. | FILING DATE | FIRST NAMED INVENTOR | ATTORNEY DOCKET NO. | CONFIRMATION NO. |
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| 09/919,608 | 08/01/2001 | Jens Thomas Mueller | 225/50240 | 2520 |

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EXAMINER

MERCADO, JULIAN A

| ART UNIT | PAPER NUMBER |
|----------|--------------|
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1745

DATE MAILED: 06/10/2004

Please find below and/or attached an Office communication concerning this application or proceeding.

Office Action Summary

Application No.

09/919,608

Applicant(s)

MUELLER ET AL.9

Examiner

Julian Mercado

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-- The MAILING DATE of this communication appears on the cover sheet with the correspondence address --
Period for Reply

A SHORTENED STATUTORY PERIOD FOR REPLY IS SET TO EXPIRE ____ MONTH(S) FROM THE MAILING DATE OF THIS COMMUNICATION.

- Extensions of time may be available under the provisions of 37 CFR 1.136(a). In no event, however, may a reply be timely filed after SIX (6) MONTHS from the mailing date of this communication.
- If the period for reply specified above is less than thirty (30) days, a reply within the statutory minimum of thirty (30) days will be considered timely.
- If NO period for reply is specified above, the maximum statutory period will apply and will expire SIX (6) MONTHS from the mailing date of this communication.
- Failure to reply within the set or extended period for reply will, by statute, cause the application to become ABANDONED (35 U.S.C. § 133). Any reply received by the Office later than three months after the mailing date of this communication, even if timely filed, may reduce any earned patent term adjustment. See 37 CFR 1.704(b).

Status

- 1) ☒ Responsive to communication(s) filed on 10 March 2004.
- 2a) ☒ This action is **FINAL**. 2b) ☐ This action is non-final.
- 3) ☐ Since this application is in condition for allowance except for formal matters, prosecution as to the merits is closed in accordance with the practice under *Ex parte Quayle*, 1935 C.D. 11, 453 O.G. 213.

Disposition of Claims

- 4) ☒ Claim(s) 1-17 is/are pending in the application.
- 4a) Of the above claim(s) ____ is/are withdrawn from consideration.
- 5) ☒ Claim(s) 1-12 is/are allowed.
- 6) ☒ Claim(s) 13, 15, 16 is/are rejected.
- 7) ☒ Claim(s) 14 and 17 is/are objected to.
- 8) ☐ Claim(s) ____ are subject to restriction and/or election requirement.

Application Papers

- 9) ☐ The specification is objected to by the Examiner.
- 10) ☐ The drawing(s) filed on ____ is/are: a) ☐ accepted or b) ☐ objected to by the Examiner.
Applicant may not request that any objection to the drawing(s) be held in abeyance. See 37 CFR 1.85(a).
Replacement drawing sheet(s) including the correction is required if the drawing(s) is objected to. See 37 CFR 1.121(d).
- 11) ☐ The oath or declaration is objected to by the Examiner. Note the attached Office Action or form PTO-152.

Priority under 35 U.S.C. § 119

- 12) ☐ Acknowledgment is made of a claim for foreign priority under 35 U.S.C. § 119(a)-(d) or (f).
- a) ☐ All b) ☐ Some * c) ☐ None of:
- ☐ Certified copies of the priority documents have been received.
 - ☐ Certified copies of the priority documents have been received in Application No. ____.
 - ☐ Copies of the certified copies of the priority documents have been received in this National Stage application from the International Bureau (PCT Rule 17.2(a)).

* See the attached detailed Office action for a list of the certified copies not received.

Attachment(s)

- ☐ Notice of References Cited (PTO-892)
- ☐ Notice of Draftsperson's Patent Drawing Review (PTO-948)
- ☐ Information Disclosure Statement(s) (PTO-1449 or PTO/SB/08)
Paper No(s)/Mail Date ____.
- ☐ Interview Summary (PTO-413)
Paper No(s)/Mail Date. ____.
- ☐ Notice of Informal Patent Application (PTO-152)
- ☐ Other: ____.

DETAILED ACTION

Remarks

This Office action is responsive to applicant's amendment filed March 10, 2004.

Claim Rejections - 35 USC § 103

The following is a quotation of 35 U.S.C. 103(a) which forms the basis for all obviousness rejections set forth in this Office action:

(a) A patent may not be obtained though the invention is not identically disclosed or described as set forth in section 102 of this title, if the differences between the subject matter sought to be patented and the prior art are such that the subject matter as a whole would have been obvious at the time the invention was made to a person having ordinary skill in the art to which said subject matter pertains. Patentability shall not be negated by the manner in which the invention was made.

Claims 13, 15 and 16 are rejected under 35 U.S.C. 103(a) as being unpatentable over Lamm et al. (DE 198 078 78) in view of Grot et al. (U.S. Pat. 5,919,583)

The rejection is maintained for the reasons of record and for the additional reasons to follow in view of applicant's amendment to independent claim 13. The examiner notes that claim 13 has been amended to recite that the combined anion and cation exchanger is connected in said line between said tank and said at least one mixture-conveying device. In the prior Office action the examiner had relied on Lamm et al.'s injection pump [42] to read on the claimed mixture-conveying device. (Lamm et al., 8th paragraph) However, a mixture-conveying device, giving this limitation its broadest reasonable interpretation, may also comprise a variety of other devices which similarly perform the function of conveying a fluid stream. In view of applicant's amendment to claim 13, Lamm et al. is maintained to teach the ion exchanger [74] as between

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the tank [38] and a mixture-conveying device, the mixture-conveying device in this case being one-way valve [82] and/or adjustable valve [84]. Refer to Lamm et al., 5th to the last paragraph:

The outlet of the ion exchanger 74 is connected to circulation line 50 upstream of gas separator 52. As depicted, this connection comprises a one way valve 82 and an adjustable valve 84.

By this description and within a broad reasonable interpretation, the valves [82] and [84] are not considered to be precluded from reading on the claimed mixture-conveying device.

Applicant submits that the ion exchanger in Lamm et al. is remote from the “exchanger” (note: by “exchanger” it appears to the examiner that applicant is referring to the “line”) and is indirectly connected only to an output. The examiner concedes that the ion exchanger is remote from the fuel line (see examiner’s reasons for allowance of independent claim 1 in the prior Office action), however, the examiner asserts that indeed the ion exchanger [74] in Lamm et al. is connected in a line between tank [38] and at least one mixture-conveying device [82] or [84]. Refer to the prior interpretation of the claimed “line” in the prior Office action. In view of applicant’s amendment to claim 13, the configuration of a “line” in Lamm et al. may be understood by (starting from tank [38]) tracing a line to the ion exchanger [74] via connection [44], through supply line [18], through circulation line [50], through gas separator [52] through liquid separator [58], through ion exchanger [74] then to mixture-conveying devices [82] or [84]. This example is considered to show the tank [38]/ion exchanger [74]/mixture-conveying device [82] or [84] in the presently claimed arrangement.

Allowable Subject Matter

Claims 1-12 are allowed for the reasons set forth in the prior Office action.

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Claims 14 and 17 are maintained objected to as being dependent upon a rejected base claim, but would be allowable if rewritten in independent form including all of the limitations of the base claim and any intervening claims. The examiner's statement of reasons for the indication of allowable subject matter has been set forth in the prior Office action.

Any comments considered necessary by applicant must be submitted no later than the payment of the issue fee and, to avoid processing delays, should preferably accompany the issue fee. Such submissions should be clearly labeled "Comments on Statement of Reasons for Allowance."

Conclusion

Applicant's amendment necessitated the new ground(s) of rejection presented in this Office action. Accordingly, **THIS ACTION IS MADE FINAL**. See MPEP § 706.07(a). Applicant is reminded of the extension of time policy as set forth in 37 CFR 1.136(a).

A shortened statutory period for reply to this final action is set to expire **THREE MONTHS** from the mailing date of this action. In the event a first reply is filed within **TWO MONTHS** of the mailing date of this final action and the advisory action is not mailed until after the end of the **THREE-MONTH** shortened statutory period, then the shortened statutory period will expire on the date the advisory action is mailed, and any extension fee pursuant to 37 CFR 1.136(a) will be calculated from the mailing date of the advisory action. In no event, however, will the statutory period for reply expire later than **SIX MONTHS** from the date of this final action.

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Any inquiry concerning this communication or earlier communications from the examiner should be directed to Julian A. Mercado whose telephone number is (703) 305-0511. The examiner can normally be reached on Monday through Friday.

If attempts to reach the examiner by telephone are unsuccessful, the examiner's supervisor, Patrick J. Ryan, can be reached on (703) 308-2383. The fax phone number for the organization where this application or proceeding is assigned is (703) 872-9306.

Any inquiry of a general nature or relating to the status of this application or proceeding should be directed to the receptionist whose telephone number is (703) 308-0661.



jam



Patrick Ryan
Supervisory Patent Examiner
Technology Center 1700